

PATENT COOPERATION TREATY

From the INTERNATIONAL BUREAU

PCT

NOTIFICATION CONCERNING
SUBMISSION OR TRANSMITTAL
OF PRIORITY DOCUMENT

(PCT Administrative Instructions, Section 411)

To:

OY JALO ANT-WUORINEN AB
Iso Roobertinkatu 4-6 A
FIN-00120 Helsinki
Finland

24. 09. 2003

Oy JALO ANT-WUORINEN Ab

Date of mailing (day/month/year) 16 September 2003 (16.09.03)	
Applicant's or agent's file reference 39909	IMPORTANT NOTIFICATION
International application No. PCT/FI03/00528	International filing date (day/month/year) 30 June 2003 (30.06.03)
International publication date (day/month/year) Not yet published	Priority date (day/month/year) 28 June 2002 (28.06.02)
Applicant BIOTIE THERAPIES OYJ et al	

- The applicant is hereby notified of the date of receipt (except where the letters "NR" appear in the right-hand column) by the International Bureau of the priority document(s) relating to the earlier application(s) indicated below. Unless otherwise indicated by an asterisk appearing next to a date of receipt, or by the letters "NR", in the right-hand column, the priority document concerned was submitted or transmitted to the International Bureau in compliance with Rule 17.1(a) or (b).
- This updates and replaces any previously issued notification concerning submission or transmittal of priority documents.
- An asterisk(*) appearing next to a date of receipt, in the right-hand column, denotes a priority document submitted or transmitted to the International Bureau but not in compliance with Rule 17.1(a) or (b). In such a case, the attention of the applicant is directed to Rule 17.1(c) which provides that no designated Office may disregard the priority claim concerned before giving the applicant an opportunity, upon entry into the national phase, to furnish the priority document within a time limit which is reasonable under the circumstances.
- The letters "NR" appearing in the right-hand column denote a priority document which was not received by the International Bureau or which the applicant did not request the receiving Office to prepare and transmit to the International Bureau, as provided by Rule 17.1(a) or (b), respectively. In such a case, the attention of the applicant is directed to Rule 17.1(c) which provides that no designated Office may disregard the priority claim concerned before giving the applicant an opportunity, upon entry into the national phase, to furnish the priority document within a time limit which is reasonable under the circumstances.

<u>Priority date</u>	<u>Priority application No.</u>	<u>Country or regional Office or PCT receiving Office</u>	<u>Date of receipt of priority document</u>
28 June 2002 (28.06.02)	20021275	FI	10 Sept 2003 (10.09.03)
14 April 2003 (14.04.03)	20030564	FI	10 Sept 2003 (10.09.03)

The International Bureau of WIPO
34, chemin des Colombettes
1211 Geneva 20, Switzerland

Facsimile No. (41-22) 338.87.20

Authorized officer

Florian REAL

Telephone No. (41-22) 338 9772

TENT COOPERATION TREATY

PCT

NOTIFICATION OF THE RECORDING
OF A CHANGE(PCT Rule 92bis.1 and
Administrative Instructions, Section 422)

From the INTERNATIONAL BUREAU

To:

KOLSTER OY AB
Iso Roobertinkatu 23
P.O. Box 148
FIN-00121 Helsinki
Finland

Date of mailing (day/month/year) 02 April 2004 (02.04.2004)	IMPORTANT NOTIFICATION
Applicant's or agent's file reference 39909	
International application No. PCT/FI2003/000528	International filing date (day/month/year) 30 June 2003 (30.06.2003)

1. The following indications appeared on record concerning:

☒ the applicant ☐ the inventor ☐ the agent ☐ the common representative

Name and Address BIOTIE THERAPIES OYJ Tykistökatu 6 FIN-20520 Turku Finland	State of Nationality FI	State of Residence FI
	Telephone No.	
	Facsimile No.	
	Teleprinter No.	

2. The International Bureau hereby notifies the applicant that the following change has been recorded concerning:

☐ the person ☒ the name ☐ the address ☐ the nationality ☐ the residence

Name and Address BIOTIE THERAPIES CORPORATION Tykistökatu 6 FIN-20520 Turku Finland	State of Nationality FI	State of Residence FI
	Telephone No.	
	Facsimile No.	
	Teleprinter No.	

3. Further observations, if necessary:

4. A copy of this notification has been sent to:

<input checked="" type="checkbox"/> the receiving Office	<input type="checkbox"/> the designated Offices concerned
<input type="checkbox"/> the International Searching Authority	<input checked="" type="checkbox"/> the elected Offices concerned
<input type="checkbox"/> the International Preliminary Examining Authority	<input type="checkbox"/> other:

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland Facsimile No. (41-22) 338.87.20	Authorized officer Ana MILLIQUET-ROSLIK Telephone No. (41-22) 338 9613
---	--

PATENT COOPERATION TREATY

From the INTERNATIONAL BUREAU

PCT

NOTICE INFORMING THE APPLICANT OF THE
COMMUNICATION OF THE INTERNATIONAL
APPLICATION TO THE DESIGNATED OFFICES

(PCT Rule 47.1(c), first sentence)

To:

OY JALO ANT-WUORINEN AB
Iso Roobertinkatu 4-6 A
FIN-00120 Helsinki
FINLANDE

SAAPUNUT

02.02.2004

Oy JALO ANT-WUORINEN AB

Date of mailing (day/month/year)
08 January 2004 (08.01.2004)

Applicant's or agent's file reference
39909

IMPORTANT NOTICE

International application No.
PCT/FI2003/000528

International filing date (day/month/year)
30 June 2003 (30.06.2003)

Priority date (day/month/year)
28 June 2002 (28.06.2002)

Applicant
BIOTIE THERAPIES OYJ et al

1. Notice is hereby given that the International Bureau has **communicated**, as provided in Article 20, the international application to the following designated Offices on the date indicated above as the date of mailing of this notice:

AU, AZ, BY, CH, CN, CO, DE, DZ, EP, HU, JP, KG, KP, KR, MD, MK, MZ, RU, TM, US

In accordance with Rule 47.1(c), third sentence, those Offices will accept the present notice as conclusive evidence that the communication of the international application has duly taken place on the date of mailing indicated above and no copy of the international application is required to be furnished by the applicant to the designated Office(s).

2. The following designated Offices have waived the requirement for such a communication at this time:

AE, AG, AL, AM, AP, AT, BA, BB, BG, BR, BZ, CA, CR, CU, CZ, DK, DM, EA, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, ID, IL, IN, IS, KE, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MG, MN, MW, MX, NI, NO, NZ, OA, OM, PG, PH, PL, PT, RO, SC, SD, SE, SG, SK, SL, SY, TJ, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW

The communication will be made to those Offices only upon their request. Furthermore, those Offices do not require the applicant to furnish a copy of the international application (Rule 49.1(a-bis)).

3. Enclosed with this notice is a copy of the international application as published by the International Bureau on 08 January 2004 (08.01.2004) under No. WO 2004/002495

4. **TIME LIMITS for filing a demand for international preliminary examination and for entry into the national phase**

The applicable time limit for entering the national phase will, **subject to what is said in the following paragraph**, be **30 MONTHS** from the priority date, not only in respect of any elected Office if a demand for international preliminary examination is filed before the expiration of **19 months** from the priority date, but also in respect of any designated Office, in the absence of filing of such demand, where Article 22(1) as modified with effect from 1 April 2002 applies in respect of that designated Office. For further details, see *PCT Gazette* No. 44/2001 of 1 November 2001, pages 19926, 19932 and 19934, as well as the *PCT Newsletter*, October and November 2001 and February 2002 issues.

In practice, **time limits other than the 30-month time limit** will continue to apply, for various periods of time, in respect of certain designated or elected Offices. For **regular updates on the applicable time limits** (20, 21, 30 or 31 months, or other time limit), Office by Office, refer to the *PCT Gazette*, the *PCT Newsletter* and the *PCT Applicant's Guide*, Volume II, National Chapters, all available from WIPO's Internet site, at <http://www.wipo.int/pc/en/index.html>.

For filing a **demand for international preliminary examination**, see the *PCT Applicant's Guide*, Volume I/A, Chapter IX. Only an applicant who is a national or resident of a PCT Contracting State which is bound by Chapter II has the right to file a demand for international preliminary examination (at present, all PCT Contracting States are bound by Chapter II).

It is the applicant's **sole responsibility** to monitor all these time limits.

The International Bureau of WIPO
34, chemin des Colombettes
1211 Geneva 20, Switzerland

Authorized officer

Gijsbertus Beijer - Carlos Roy

Facsimile No.(41-22) 740.14.35

Telephone No.(41-22) 338.91.11

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY (Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 39909	FOR FURTHER ACTION See Form PCT/IPEA/416	
International application No. PCT/FI2003/000528	International filing date (day/month/year) 30.06.2003	Priority date (day/month/year) 28.06.2002
International Patent Classification (IPC) or national classification and IPC A61K 31/702, A61P 1/04, A61P 1/12		
Applicant Biotie Therapies Oyj et al		

1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 6 sheets, including this cover sheet.
3. This report is also accompanied by ANNEXES, comprising:
 - a. ☐ (sent to the applicant and to the International Bureau) a total of _____ sheets, as follows:
 - ☐ sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).
 - ☐ sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.
 - b. ☐ (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) _____, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).

4. This report contains indications relating to the following items:
- | | | |
|-------------------------------------|--------------|---|
| <input checked="" type="checkbox"/> | Box No. I | Basis of the report |
| <input type="checkbox"/> | Box No. II | Priority |
| <input checked="" type="checkbox"/> | Box No. III | Non-establishment of opinion with regard to novelty, inventive step and industrial applicability |
| <input type="checkbox"/> | Box No. IV | Lack of unity of invention |
| <input checked="" type="checkbox"/> | Box No. V | Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement |
| <input checked="" type="checkbox"/> | Box No. VI | Certain documents cited |
| <input type="checkbox"/> | Box No. VII | Certain defects in the international application |
| <input type="checkbox"/> | Box No. VIII | Certain observations on the international application |

Date of submission of the demand 29.12.2003	Date of completion of this report 29.09.2004
Name and mailing address of the IPEA/SE Patent- och registreringsverket Box 5055 S-102 42 STOCKHOLM Facsimile No. +46 8 667 72 88	Authorized officer Carolina Gómez Lagerlöf/EÖ Telephone No. +46 8 782 25 00

Form PCT/IPEA/409 (cover sheet) (January 2004)

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/FI2003/000528

Box No. I Basis of the report

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.

- ☐ This report is based on a translation from the original language into the following language _____, which is the language of a translation furnished for the purposes of:
- ☐ international search (under Rules 12.3 and 23.1(b))
 - ☐ publication of the international application (under Rule 12.4)
 - ☐ international preliminary examination (under Rules 55.2 and/or 55.3)

2. With regard to the elements of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:

- ☒ the international application as originally filed/furnished
- ☐ the description:

pages _____ as originally filed/furnished

pages* _____ received by this Authority on _____

pages* _____ received by this Authority on _____

- ☐ the claims:
- pages _____ as originally filed/furnished

pages* _____ as amended (together with any statement) under Article 19

pages* _____ received by this Authority on _____

pages* _____ received by this Authority on _____

- ☐ the drawings:
- pages _____ as originally filed/furnished

pages* _____ received by this Authority on _____

pages* _____ received by this Authority on _____

- ☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.

3. ☐ The amendments have resulted in the cancellation of:

☐ the description, pages _____

☐ the claims, Nos. _____

☐ the drawings, sheets/figs _____

☐ the sequence listing (specify): _____

☐ any table(s) related to the sequence listing (specify): _____

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

☐ the description, pages _____

☐ the claims, Nos. _____

☐ the drawings, sheets/figs _____

☐ the sequence listing (specify): _____

☐ any table(s) related to the sequence listing (specify): _____

* If item 4 applies, some or all of those sheets may be marked "superseded."

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/FI2003/000528

Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non obvious), or to be industrially applicable have not been examined in respect of:

☐ the entire international application

☒ claims Nos. 52-53

because:

☒ the said international application, or the said claims Nos. 52-53
relate to the following subject matter which does not require an international preliminary examination (*specify*):

See PCT Rule 67.1.(iv): Methods for treatment of the human or animal body by surgery or therapy, as well as diagnostic methods.

☐ the description, claims or drawings (*indicate particular elements below*) or said claims Nos. _____
are so unclear that no meaningful opinion could be formed (*specify*):

☐ the claims, or said claims Nos. _____ are so inadequately supported
by the description that no meaningful opinion could be formed.

☐ no international search report has been established for said claims Nos. _____

☐ the nucleotide and/or amino acid sequence listing does not comply with the standard provided for in Annex C of the Administrative Instructions in that:

the written form

☐

has not been furnished

☐

does not comply with the standard

the computer readable form

☐

has not been furnished

☐

does not comply with the standard

☐ the tables related to the nucleotide and/or amino acid sequence listing, if in computer readable form only, do not comply with the technical requirements provided for in the Annex C-bis of the Administrative Instructions.

☐ See Supplemental Box for further details.

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/FI2003/000528

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	<u>1-51, 54-79</u>	YES
	Claims	_____	NO
Inventive step (IS)	Claims	_____	YES
	Claims	<u>1-51, 54-79</u>	NO
Industrial applicability (IA)	Claims	<u>1-51, 54-79</u>	YES
	Claims	_____	NO

2. Citations and explanations (Rule 70.7)

During the search the following documents were found:

- A WO0143751
- B WO0051644
- C WO0033854
- D WO9639190
- E US5217715

Document A discloses *Helicobacter pylori*-binding substances comprising oligosaccharides. The oligosaccharides are covered by the scope of claim 1 in the application.

Document B relates to compositions containing oligosaccharides for the treatment of conditions initiated or mediated by EPEC. The oligosaccharides are covered by the scope of claim 1 in the application.

Document C discloses compositions containing different oligosaccharides for the treatment of disorders of the digestive tract.

Document D discloses compositions containing oligosaccharides for the treatment of traveller's diarrhoea caused by ETEC.

Document E relates to oligosaccharides that can be useful in the treatment of disorders caused by pulmonary pathogenic bacteria.

Claims 1-9 and 11-31 in the application relate to a composition containing at least two compounds containing a pathogen inhibiting oligosaccharide sequence.

.../...

Supplemental Box

In case the space in any of the preceding boxes is not sufficient.

Continuation of: BOX V

Some of the oligosaccharide sequences are known and it is also known to use them in pharmaceutical compositions for the treatment of conditions caused by *Helicobacter pylori* (document A) or EPEC (document B).

The difference between the claimed compositions and the compositions known in the art is the number of compounds containing the oligosaccharide sequences.

However, document C shows pharmaceutical compositions containing different oligosaccharides that are useful in the treatment of disorders of the digestive tract.

It is considered obvious to a person skilled in the art to make a composition with at least two compounds containing different oligosaccharides, when it is known that these compounds have the desired activity and it is also known to mix different oligosaccharides in a pharmaceutical composition.

Claims 10, 32-51 and 54-79 relate to pharmaceutical compositions containing oligosaccharides, their use and different methods of administration.

It is known that compositions containing very similar oligosaccharides have the same use and are administered in the same way as the claimed compositions (see documents A and B).

It is considered obvious to a person skilled in the art to examine if an oligosaccharide can be used in a pharmaceutical composition for treatment of gastrointestinal infections, when it is known to use very similar oligosaccharides in pharmaceutical compositions with that use.

Documents D and E show the general state of the art.

Thus, claims 1-51 and 54-79 are considered to fulfil the requirement of novelty but not that of inventive step.

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/FI2003/000528

Box No. VI Certain documents cited

1. Certain published documents (Rule 70.10)

Application No. Patent No.	Publication date (day/month/year)	Filing date (day/month/year)	Priority date (valid claim) (day/month/year)
WO 02056893	25.07.2002	18.01.2002	19.01.2001

2. Non-written disclosures (Rule 70.9)

Kind of non-written disclosure	Date of non-written disclosure (day/month/year)	Date of written disclosure referring to non-written disclosure (day/month/year)

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY
(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Rec'd PCT/PTO 17 DEC 2004

REC'D 12 OCT 2004

PCT

Applicant's or agent's file reference 39909	FOR FURTHER ACTION See Form PCT/IPEA/416	
International application No. PCT/FI2003/000528	International filing date (day/month/year) 30.06.2003	Priority date (day/month/year) 28.06.2002
International Patent Classification (IPC) or national classification and IPC A61K 31/702, A61P 1/04, A61P 1/12		
Applicant Biotie Therapies Oyj et al		

- This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.
- This REPORT consists of a total of 6 sheets, including this cover sheet.
- This report is also accompanied by ANNEXES, comprising:
 - ☐ (sent to the applicant and to the International Bureau) a total of _____ sheets, as follows:
 - ☐ sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).
 - ☐ sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.
 - ☐ (sent to the International Bureau only) a total of _____, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).

- This report contains indications relating to the following items:

<input checked="" type="checkbox"/>	Box No. I	Basis of the report
<input type="checkbox"/>	Box No. II	Priority
<input checked="" type="checkbox"/>	Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
<input type="checkbox"/>	Box No. IV	Lack of unity of invention
<input checked="" type="checkbox"/>	Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
<input checked="" type="checkbox"/>	Box No. VI	Certain documents cited
<input type="checkbox"/>	Box No. VII	Certain defects in the international application
<input type="checkbox"/>	Box No. VIII	Certain observations on the international application

Date of submission of the demand 29.12.2003	Date of completion of this report 29.09.2004
Name and mailing address of the IPEA/SE Patent- och registreringsverket Box 5055 S-102 42 STOCKHOLM Facsimile No. +46 8 667 72 88	Authorized officer Carolina Gómez Lagerlöf/EÖ Telephone No. +46 8 782 25 00

Box No. I Basis of the report

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ This report is based on a translation from the original language into the following language _____, which is the language of a translation furnished for the purposes of:

- ☐ international search (under Rules 12.3 and 23.1(b))
☐ publication of the international application (under Rule 12.4)
☐ international preliminary examination (under Rules 55.2 and/or 55.3)

2. With regard to the elements of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:

☒ the international application as originally filed/furnished

☐ the description:

pages _____ as originally filed/furnished
pages* _____ received by this Authority on _____
pages* _____ received by this Authority on _____

☐ the claims:

pages _____ as originally filed/furnished
pages* _____ as amended (together with any statement) under Article 19
pages* _____ received by this Authority on _____
pages* _____ received by this Authority on _____

☐ the drawings:

pages _____ as originally filed/furnished
pages* _____ received by this Authority on _____
pages* _____ received by this Authority on _____

☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.

3. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages _____
☐ the claims, Nos. _____
☐ the drawings, sheets/figs _____
☐ the sequence listing (*specify*): _____
☐ any table(s) related to the sequence listing (*specify*): _____

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

- ☐ the description, pages _____
☐ the claims, Nos. _____
☐ the drawings, sheets/figs _____
☐ the sequence listing (*specify*): _____
☐ any table(s) related to the sequence listing (*specify*): _____

* If item 4 applies, some or all of those sheets may be marked "superseded."

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.
PCT/JP003/000528

Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non obvious), or to be industrially applicable have not been examined in respect of:

☐ the entire international application

☒ claims Nos. 52-53

because:

☒ the said international application, or the said claims Nos. 52-53
relate to the following subject matter which does not require an international preliminary examination (*specify*):

See PCT Rule 67.1.(iv): Methods for treatment of the human or animal body by surgery or therapy, as well as diagnostic methods.

☐ the description, claims or drawings (*indicate particular elements below*) or said claims Nos. _____
are so unclear that no meaningful opinion could be formed (*specify*):

☐ the claims, or said claims Nos. _____ are so inadequately supported
by the description that no meaningful opinion could be formed.

☐ no international search report has been established for said claims Nos. _____

☐ the nucleotide and/or amino acid sequence listing does not comply with the standard provided for in Annex C of the Administrative Instructions in that:

the written form

☐

has not been furnished

☐

does not comply with the standard

the computer readable form

☐

has not been furnished

☐

does not comply with the standard

☐ the tables related to the nucleotide and/or amino acid sequence listing, if in computer readable form only, do not comply with the technical requirements provided for in the Annex C-bis of the Administrative Instructions.

☐ See Supplemental Box for further details.

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/JP2003/000528

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	<u>1-51, 54-79</u>	YES
	Claims	_____	NO
Inventive step (IS)	Claims	_____	YES
	Claims	<u>1-51, 54-79</u>	NO
Industrial applicability (IA)	Claims	<u>1-51, 54-79</u>	YES
	Claims	_____	NO

2. Citations and explanations (Rule 70.7)

During the search the following documents were found:

A WO0143751
 B WO0051644
 C WO0033854
 D WO9639190
 E US5217715

Document A discloses *Helicobacter pylori*-binding substances comprising oligosaccharides. The oligosaccharides are covered by the scope of claim 1 in the application.

Document B relates to compositions containing oligosaccharides for the treatment of conditions initiated or mediated by EPEC. The oligosaccharides are covered by the scope of claim 1 in the application.

Document C discloses compositions containing different oligosaccharides for the treatment of disorders of the digestive tract.

Document D discloses compositions containing oligosaccharides for the treatment of traveller's diarrhoea caused by ETEC.

Document E relates to oligosaccharides that can be useful in the treatment of disorders caused by pulmonary pathogenic bacteria.

Claims 1-9 and 11-31 in the application relate to a composition containing at least two compounds containing a pathogen inhibiting oligosaccharide sequence.

.../...

Supplemental Box

In case the space in any of the preceding boxes is not sufficient.

Continuation of: Box V

Some of the oligosaccharide sequences are known and it is also known to use them in pharmaceutical compositions for the treatment of conditions caused by *Helicobacter pylori* (document A) or EPEC (document B).

The difference between the claimed compositions and the compositions known in the art is the number of compounds containing the oligosaccharide sequences.

However, document C shows pharmaceutical compositions containing different oligosaccharides that are useful in the treatment of disorders of the digestive tract.

It is considered obvious to a person skilled in the art to make a composition with at least two compounds containing different oligosaccharides, when it is known that these compounds have the desired activity and it is also known to mix different oligosaccharides in a pharmaceutical composition.

Claims 10, 32-51 and 54-79 relate to pharmaceutical compositions containing oligosaccharides, their use and different methods of administration.

It is known that compositions containing very similar oligosaccharides have the same use and are administered in the same way as the claimed compositions (see documents A and B).

It is considered obvious to a person skilled in the art to examine if an oligosaccharide can be used in a pharmaceutical composition for treatment of gastrointestinal infections, when it is known to use very similar oligosaccharides in pharmaceutical compositions with that use.

Documents D and E show the general state of the art.

Thus, claims 1-51 and 54-79 are considered to fulfil the requirement of novelty but not that of inventive step.

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/03/000528

Box No. VI Certain documents cited

1. Certain published documents (Rule 70.10)

Application No. Patent No.	Publication date (day/month/year)	Filing date (day/month/year)	Priority date (valid claim) (day/month/year)
WO 02056893	25.07.2002	18.01.2002	19.01.2001

2. Non-written disclosures (Rule 70.9)

Kind of non-written disclosure	Date of non-written disclosure (day/month/year)	Date of written disclosure referring to non-written disclosure (day/month/year)

INTERNATIONAL SEARCH REPORT

International application No.

PCT/FI 03/00528

A. CLASSIFICATION OF SUBJECT MATTER

IPC7: A61K 31/702, A61P 1/04, A61P 1/12

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC7: A61K, A61P

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

SE,DK,FI,NO classes as above

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

WPI DATA, CHEM. ABS DATA, EMBASE, MEDLINE

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P,X	WO 02056893 A1 (CARBION OY), 25 July 2002 (25.07.02)	1-79
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X	WO 0143751 A1 (A+SCIENCE INVEST AB), 21 June 2001 (21.06.01)	10,32-79
Y		1-9,11-31
	--	
X	WO 0051644 A1 (THE GOVERNORS OF THE UNIVERSITY OF ALBERTA), 8 Sept 2000 (08.09.00)	10,32-79
Y		1-9,11-31
	--	

☒ Further documents are listed in the continuation of Box C.

☒ See patent family annex.

* Special categories of cited documents:

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier application or patent but published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance: the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance: the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search

7 October 2003

Date of mailing of the international search report

08-10-2003

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INTERNATIONAL SEARCH REPORT

International application No.

PCT/FI 03/00528

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	WO 0033854 A1 (N.V. NUTRICIA), 15 June 2000 (15.06.00) --	1-9,11-31
A	WO 9639190 A1 (SYNSORB BIOTECH, INC.), 12 December 1996 (12.12.96) --	1-79
A	US 5217715 A (HOWARD C. KRIVAN ET AL), 8 June 1993 (08.06.93) -- -----	1-79

INTERNATIONAL SEARCH REPORT

International application No.
PCT/FI03/00528

Box I Observations where certain claims were found unsearchable (Continuation of Item 1 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☒ Claims Nos.: **52-53**
because they relate to subject matter not required to be searched by this Authority, namely:
see next sheet
2. ☐ Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
☐ No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

International application No.
PCT/FI03/00528

Claims 52-53 relate to methods of treatment of the human or animal body by surgery or by therapy or diagnostic methods practised on the human or animal body (PCT Rule 39.1(iv)). Nevertheless, a search has been executed for these claims. The search has been based on the alleged effects of the compounds or compositions.

INTERNATIONAL SEARCH REPORT

Information on patent family members

06/09/03

International application No.

PCT/FI 03/00528

Patent document cited in search report			Publication date	Patent family member(s)		Publication date
WO	02056893	A1	25/07/02	FI	4998 U	19/07/01
				FI	20010118 A,V	20/07/02
WO	0143751	A1	21/06/01	AU	2418801 A	25/06/01
				CA	2392766 A	21/06/01
				CN	1411376 T	16/04/03
				CZ	20021989 A	16/10/02
				EE	200200312 A	16/06/03
				EP	1237558 A	11/09/02
				HU	0204243 A	28/03/03
				JP	2003517015 T	20/05/03
				NO	20022890 A	15/08/02
				SE	9904581 D	00/00/00
				SK	8152002 A	06/11/02
WO	0051644	A1	08/09/00	AU	2899500 A	21/09/00
				CA	2359754 A	08/09/00
				EP	1159010 A	05/12/01
				US	6291435 B	18/09/01
WO	0033854	A1	15/06/00	AU	1896600 A	26/06/00
				CA	2353544 A	15/06/00
				EP	1137424 A	04/10/01
				JP	2002531510 T	24/09/02
				NL	1010770 C	00/00/00
WO	9639190	A1	12/12/96	AU	713668 B	09/12/99
				AU	4873296 A	24/12/96
				CA	2210193 A	12/12/96
				EP	0831914 A	01/04/98
				IL	117655 A	31/08/00
				JP	11506458 T	08/06/99
				NZ	302632 A	29/11/99
				NZ	337148 A	23/02/01
				TW	474814 B	00/00/00
				US	5627163 A	06/05/97
				ZA	9602847 A	24/02/97
US	5217715	A	08/06/93	US	5225330 A	06/07/93
				US	5386027 A	31/01/95
				US	5389521 A	14/02/95
				US	5529904 A	25/06/96